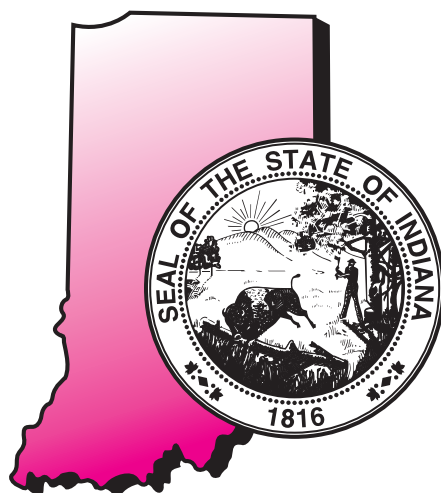


ISTEP+ Fall 2006

Indiana Statewide Testing for Educational Progress

English/Language Arts *and* Mathematics
Grade 9



Indiana Department of Education

Web Version

Use only a Number 2 pencil to respond to the questions in this book. Responses written in pen CANNOT be scored.



Whenever you see this icon, you will be doing a writing activity. Your writing will not be scored on your personal opinions or choices, but will be scored objectively on

- how clearly you address the prompt
- how well you organize your ideas
- how effectively you express yourself
- how consistently you use correct paragraphing, grammar, spelling, and punctuation

Be sure to use the rules of Standard English. Standard English is the English commonly used in formal writing. It does not include slang or jargon.

Acknowledgments: CTB is indebted to the following for permission to use material in this book.

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Test 5: English/Language Arts

The Car of the Future

Read the writing prompt below and complete the writing activity.

The automobile has changed a great deal in the slightly more than a hundred years since it first appeared on our roads, and it will probably continue to change. What changes in design or technology would you like to see in automobiles of the future?

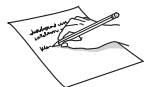
Write an essay in which you discuss the changes you would like to see in future automobiles. Describe their various new features in detail, making clear how they differ from present-day automobiles, and explain why these changes are necessary or desirable.

Be sure to include

- details about how automobiles should change in the future
- a comparison between present-day automobiles and the automobiles of the future
- an explanation of why the changes you describe are necessary or desirable
- an introduction, a body, and a conclusion to your essay

Go On





Use the Pre-Writing/Planning space or additional paper for notes, lists, webs, outlines, or anything else that might help you plan your writing. Then write your essay on the lined pages. Be sure to write neatly. Using the Editing Checklist on page 9, check your writing for correct paragraphing, grammar, spelling, punctuation, and the use of Standard English.

NOTE: Only your writing on the lined pages in this book will be scored.

Pre-Writing/Planning

Go On



Pre-Writing/Planning



Title: _____

[illegible]

Test 5

Go On



Test 5

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Test 6: English/Language Arts

For Test 6, you will read an interview and an excerpt from a book. You will answer questions based on each passage. Then you will write an essay on a related topic.

Have you ever thought about how artists start their careers? The first passage is an interview with high school senior Boris Chang, who responds to questions about one of his designs that won an award.

Now read “Boris Chang: Expressing Two Cultures.” Then do Numbers 1 through 6. You may look back at the interview as often as you like.

Go On

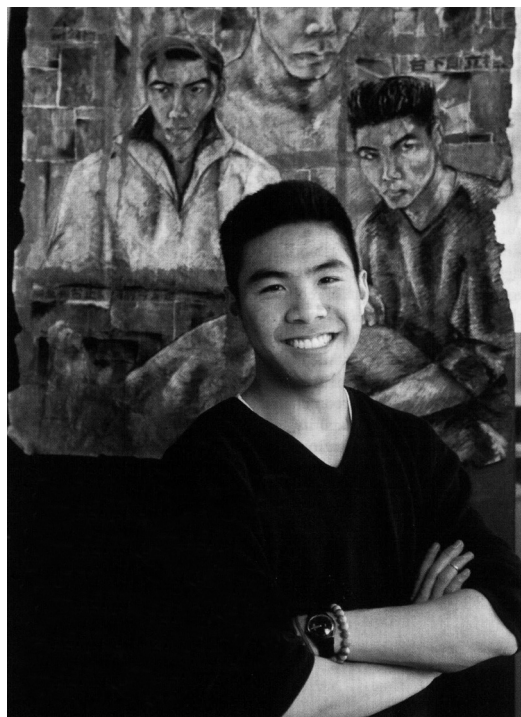


Boris Chang:

Expressing Two Cultures

(teenage artist mixes American and Chinese influences in his art)

Asian culture has always fascinated 18-year-old Boris Chang, even though he barely remembers his only visit to Taiwan (a large Chinese island), made when he was 5 years old. Boris, currently a senior at Benjamin Cardozo High School in New York City, likes to draw on his heritage when creating works like the award-winning graphic design on the opposite page. He says, "Brush painting, the use of Chinese characters, the type of design you see in Buddhist manuscripts and scrolls, all interest me. But my own graphic designs are Western, with a little Asian influence."



How did you first become involved with art?

In high school my teacher encouraged me to apply to a special program at Cooper Union for motivated high school minority students. That program really pushed me toward the arts. I discovered art was what I wanted to do in life.

How did you come to do this award-winning piece?

It's a cover for a magazine that doesn't exist. I've always wanted to create a quarterly magazine for urban youth that covers art, music, fashion, technology, and nightlife. I put my image on the cover because the magazine is designed for people like me.

Why did you call the magazine *Revolve*?

Revolve means evolution. You're constantly going around in a circle, yet changing with time. The world is always changing, so people have got to get with the program.

Go On



Why do you show yourself with one eye closed?

That was actually influenced by Buddhist culture. To me, one eye closed represents learning and wisdom. And the one open means I have the flexibility to keep on learning, that I know I have a lot to learn.

What is the letter in the lower left corner?

That's another personal thing. In Chinese that character means "sky and heaven." But I added a dot at the bottom to personalize it. Most Chinese artwork has a personal stamp with the artist's name or where they're from.

What kind of message did you want this cover to convey?

The cover expresses something I'm passionate about: urban lifestyle. In order to express this, I focused on composition and graphic elements. I wanted to combine fine art—the self-portrait—with contemporary graphic design. I wanted to give my magazine cover a modern, futuristic look with a touch of Asian influence.

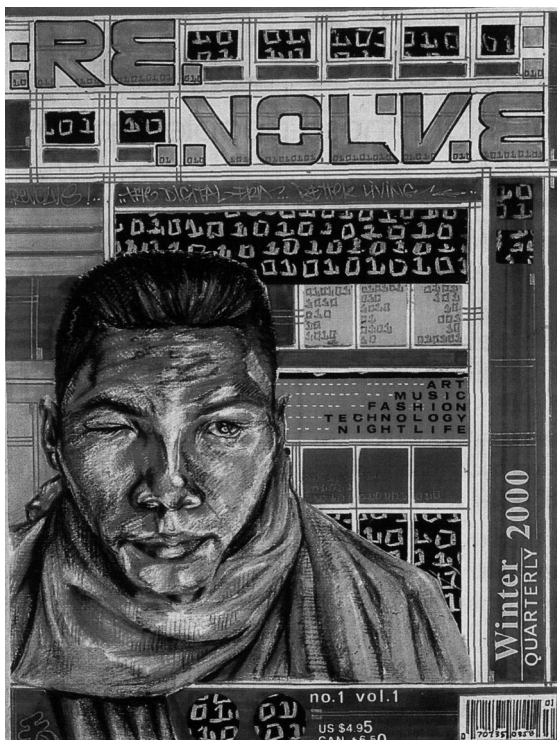
What steps did you take to create this piece?

First, I decided on my focus—graphic design for a magazine cover that would depict urban culture. Next, I decided on my materials—paper, colored pencil, art markers

for more color, and press-on text for the table of contents and date. I also used coloraid paper—textured art paper—for the colored boxes and acetate for the computer coding. I also wanted to add graffiti to stress the urban feel I was after.

Do you think your cover was successful? Why?

On a scale from 1 to 10, I would probably give it an 8. It was successful in that a lot of my ideas were carried out. I think the cover works in grabbing the viewer's attention. The composition



Go On



makes the viewer wonder what the magazine is about. You see a portrait and you see “Revolve.” You see the futuristic text, and cool design, and you wonder, “Oh, what kind of a magazine is this?” I think this cover is somewhat successful in that way.

Are you planning to go on in art as a career?

Yes, definitely. I’m pretty sure my career is going to be involved with art in some way. I’m leaning toward commercial graphic arts, the type of design you see in magazines.

What do you like best about creating art?

I like its uniqueness. Art to me is a whole subculture. It’s a lifestyle in itself. It’s an interaction with people. It’s about creating something. It’s also about having an opinion on what’s around you: what you like and what you want people to see. It’s a great feeling to be able to convey that to others and to be part of this subculture.

What advice do you have for aspiring artists like yourself?

Just really know what you want to do. Go through with what you feel passionate about. Love and understand your art. Try to do it well and learn as much as you can. Take risks and reveal an aspect of yourself through your art. The greatest art is art you put yourself into, through effort, time, and commitment. And that quality comes through to the viewer.

- 1 Which of these BEST describes the introduction to the interview?
- ☐ a brief background of the artist that includes a personal statement about his work
 - ☐ a statement about the artist's life as a high school student and his future career
 - ☐ a preface that explains the author's visit to Taiwan when he was younger
 - ☐ an explanation of the work of the artist that contrasts Western and Asian elements

- 2 Study the dictionary entry below.

artist *n.* A person whose creative work shows sensitivity and imagination.

Explain how Boris Chang fits this definition of an artist, using TWO different examples from the introduction and/or interview that support your explanation.

- 1) _____

- 2) _____

- 3 According to the information in the interview, Boris Chang is MOST interested in
- ☐ fine art
 - ☐ urban lifestyle
 - ☐ Buddhist culture
 - ☐ Chinese characters

Go On



- 4 Give TWO different examples from the introduction and/or interview that show how Boris Chang incorporated his heritage into his magazine cover design.

1) _____

2) _____

- 5 Read this sentence from the interview.

I wanted to combine fine art—the self-portrait—with contemporary graphic design.

In this sentence, *contemporary* means about the SAME as

- ☐ brief
- ☐ colorful
- ☐ current
- ☐ unique

- 6 Read this sentence from the introduction.

“But my own graphic designs are Western, with a little Asian influence.”

In this sentence, *influence* means about the SAME as

- ☐ affect
- ☐ consent
- ☐ history
- ☐ thought

Go On



English/Language Arts

Have you ever struggled to connect what you were learning in the classroom with your life outside of school?

You will now read “Making Connections,” an excerpt from Francisco Jiménez’s autobiographical novel in which he writes about his childhood experiences as a migrant farm worker. After you read the passage, you will answer some questions. Then you will write an essay on a related topic.

Read “Making Connections” and do Numbers 7 through 12. You may look back at the passage as often as you like.

Go On



In high school, Francisco Jiménez had difficulties because English was not his first language. Here, his teacher, Miss Bell, is helping him with a story he wrote for her class.



Making Connections

by Francisco Jiménez

“You’re making a lot of progress,” she said. “Your writing shows promise. If you’re able to overcome the difficulties like the one you describe in your paper and you continue working as hard as you have, you’re going to succeed.” She gave me back the paper and added, “Here, take it home, make the corrections, and turn it in to me tomorrow after class.”

“I will. Thank you, Miss Bell.” I floated out of the room, thinking about how lucky I was to be in her class. She reminded me of Mr. Lema, my sixth-grade teacher, who had helped me with English during the lunch hour.

That evening when I got home I worked on the paper. I looked at the mistakes I had made and corrected them, following Miss Bell’s suggestions. As I retyped it on the kitchen table, Mamá came over and sat next to me. “It’s late, Panchito,” she said softly. “Time for bed.”

“I am almost finished.”

“What are you working on, *mijo*?”

“It’s a paper I wrote for my English class on Trampita. My teacher liked it,” I said proudly.

“On Trampita!” she exclaimed.

She got up and stood behind me. She placed her hands on my shoulders and asked me to read it. When I finished, I felt her tears on the back of my neck.

The next day after class I turned in my revised paper to Miss Bell. She glanced at it, placed it on a pile of papers

Go On



on her desk, and picked up a book. “Have you read *The Grapes of Wrath*?” she asked. “It’s a wonderful novel by John Steinbeck.”

“No,” I said, wondering what the word *wrath* meant.

“I’d like for you to read it.” She handed it to me. “I think you’ll enjoy it. You can read it for your book report.”

When am I going to find time to read such a thick book? I thought, running my fingers along its spine. I was planning to read a smaller book for my report. Miss Bell must have noticed the pain in my face because she added, “And you’ll get extra credit because it’s a long book.” I felt better.

“Thanks!” I said. “It’ll give me a chance to improve my grade.” Her gentle smile reminded me of Mamá and the blessing she gave every morning when I left the house.

After my last class, I picked up the books and binders I needed from my locker and walked to the public library to study before going to work at five o’clock. I double-checked to make sure I had the novel with me. On the way, I kept thinking about how I was going to get through such a long book. I felt its weight on my shoulders and the back of my neck. I quickened my pace, passing students left and right. The honking of car horns from students cruising by sounded far away. I rushed into the library and went straight to my table in the left back corner, away from the main desk. I piled my books and binders on the table.

I took a deep breath, picked up the novel, and placed it in front of me. I grabbed my worn-out pocket dictionary from the stack and set it next to it. I muttered the title, “*The Grapes of Wrath*.” The word *grapes* reminded me of working in the vineyards for Mr. Sullivan in Fresno. I looked up the word *wrath* and thought of the anger I felt when I lost my blue notepad, my *librito*, in a fire in Orosi. I began reading. It was difficult; I had to look up many words, but I kept on reading. I wanted to learn more about the Joad family, who had to leave their home in Oklahoma to look for work and a better life in California. I lost track of time. Before I knew it, five o’clock had passed. I was late for work.



Go On



Test 6

When I got home that evening, I continued reading until one o'clock in the morning. That night I dreamed that my family was packing to move to Fresno to pick grapes. "We don't have to move anymore! I have to go to school!" I kept yelling, but Papá and Mamá could not hear me. I woke up exhausted.

Saturday night I skipped the school dance and stayed home to read more of the novel. I kept struggling with the reading, but I could not put it down. I finally understood what Miss Bell meant when she told me to read for enjoyment. I could relate to what I was reading. The Joad family was poor and traveled from place to place in an old jalopy, looking for work. They picked grapes and cotton and lived in labor camps similar to the ones we lived in, like Tent City in Santa Maria. Ma Joad was like Mamá and Pa Joad was a lot like Papá. Even though they were not Mexican and spoke only English, they had many of the same experiences as my family. I felt for them. I got angry with the growers who mistreated them and was glad when Tom Joad protested and fought for their rights. He reminded me of my friend Don Gabriel, the *bracero* who stood up to Díaz, the labor contractor, who tried to force Don Gabriel to pull a plow like an ox.

After I finished reading the novel, I could not get it out of my mind. I thought about it for days, even after I had turned in the book report to Miss Bell. She must have liked what I wrote, because she gave me a good grade. My success made me happy, but, this time, the grade seemed less important than what I had learned from reading the book.

7 Which of these words BEST describes the narrator’s attitude toward the characters in *The Grapes of Wrath*?

- ☐ amazed
- ☐ compassionate
- ☐ disrespectful
- ☐ insensitive

8 Explain how the title “Making Connections” BEST expresses the theme of this passage. Use ONE example from the passage to support your explanation.

9 The narrator describes feeling “lucky” to be in Miss Bell’s class. Using information from the passage, describe TWO different specific things Miss Bell does that make the narrator feel “lucky.”

1)

2)

Go On



10 Read these sentences from the passage.

I took a deep breath, picked up the novel, and placed it in front of me. I grabbed my worn-out pocket dictionary from the stack and set it next to it.

By describing the dictionary as “worn-out,” the narrator emphasizes

- ☐ his desire to please Miss Bell
- ☐ his attitude toward school books
- ☐ his lack of money to buy new things
- ☐ his dedication to learning English

11 Provide TWO different details from the passage that show the narrator is committed to being a good student.

1) _____

2) _____



12



In “Making Connections,” the narrator finds that he has much in common with the characters in *The Grapes of Wrath*.

Write an essay in which you explain how the narrator’s family is similar to the Joad family and what these similarities teach the narrator. **In your essay, be sure to provide at least TWO different details from the passage that show similarities between the narrator’s family and the Joad family and an explanation of what these similarities teach the narrator.**

You may use the space below to plan your writing. Using the Editing Checklist on page 24, check your writing for correct paragraphing, grammar, spelling, punctuation, and the use of Standard English. **Remember, your essay should be well organized and have an introduction, a body, and a conclusion.**

NOTE: Only your writing on the lined pages in this book will be scored.

Pre-Writing/Planning

Go On



Essay

Handwriting practice lines for an essay response.

Use only a Number 2 pencil to respond to the questions in this book. Responses written in pen CANNOT be scored.



If you see this symbol, you may use your reference sheet to help solve the problem.



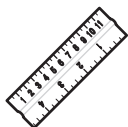
If you see this symbol, you may NOT use a calculator to solve problems in the test.



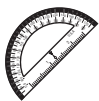
If you see this symbol, you may use a calculator to solve problems in the test.



This symbol appears at the beginning of the sections that contain gridded-response problems.

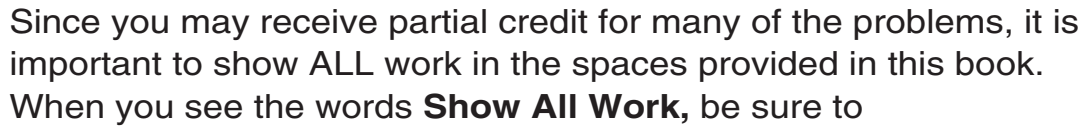


If you see this symbol, use your ruler as a straightedge or to solve the problem.



If you see this symbol, use your protractor to solve the problem.

DO NOT WRITE HERE DO NOT WRITE HERE DO NOT WRITE HERE DO NOT WRITE HERE



- 1** The table below shows Leah's bowling scores.

77	79	88	83	85	92	76	88
90	95	99	100	97	99	88	94

Bowling Scores

[illegible]

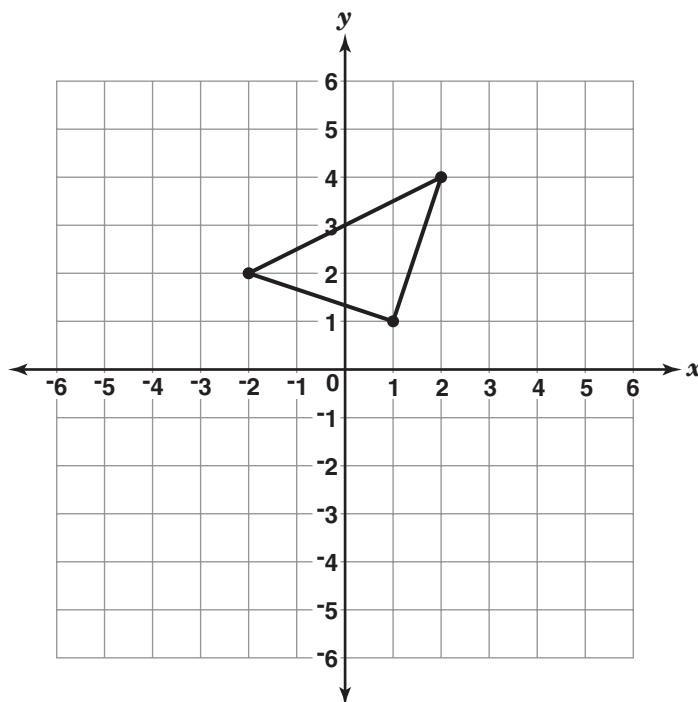
- 2 What is the slope of the equation $4x - 3y = 12$?



Show All Work

Answer _____

- 3 Look at the figure on the grid below.



Draw the figure on the grid reflected over the x -axis.

- 4 The data below show the number of people entering a store during the first hour of operation for a 16-day period.

58 32 20 73 66 28 23 45 87 65 48 77 26 38 44 72

On the lines below, explain how to determine the median of the data.

Now use the method you described above to determine the median number of people. Write your answer on the line below.

Show All Work

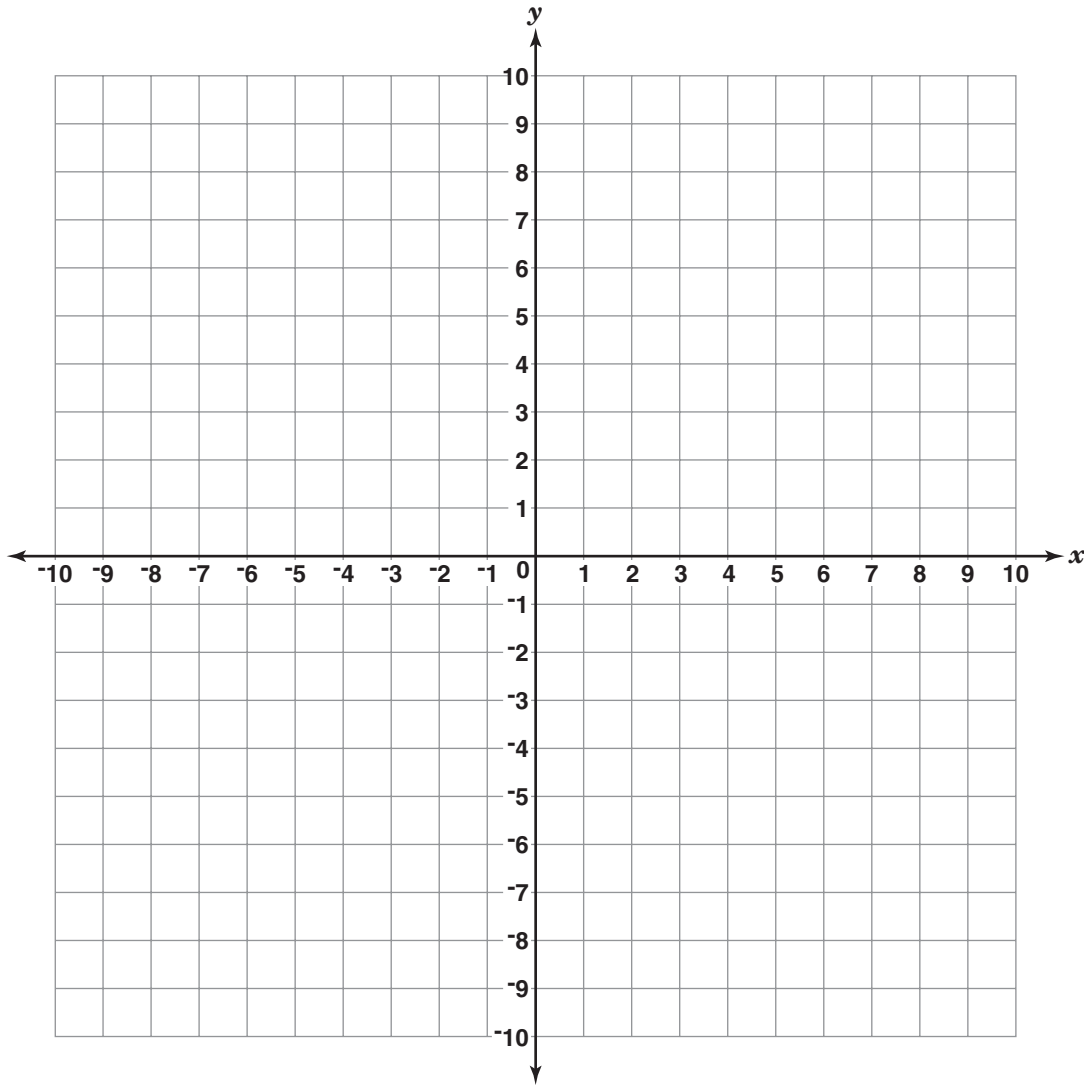
Answer _____ people

Go On



5

Graph the equation $y = 4x - 8$ on the coordinate plane below.



6 Look at the expression below.

$$\sqrt{2^3 \times 2^3 \times 1.1}$$

Between which two adjacent whole numbers does the value of the expression lie?

Show All Work

Answer _____ and _____

On the lines below, explain how you arrived at your answer.

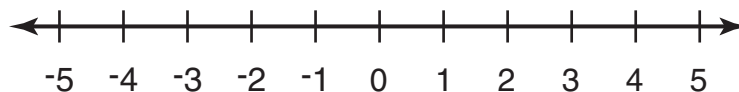
Go On



7 Look at the inequality below.

$$x + 1 \leq 4$$

Graph the inequality on the number line.



8 What is the equation of the line that has a slope of $\frac{1}{3}$ and passes through the point (3, 3)? Write the equation on the line below.



Show All Work

Equation _____



STOP! STOP! STOP! STOP! STOP!

Test 8: Mathematics



Since you may receive partial credit for many of the problems, it is important to show ALL work in the spaces provided in this book. When you see the words **Show All Work**, be sure to

- show all the steps needed to solve the problem
- make your handwriting clear and easy to read
- write the answer on the answer line

1

Amber is using $\frac{1}{2}$ fluid ounce of food coloring to change the color of 64 fluid ounces of water.



How many GALLONS of food coloring would she need to change the color of 448 gallons of water if she used the same ratio?

Show All Work

Answer _____ gallons

Go On



2



Carpet is to be installed in a rectangular living room that measures 18 feet by 24 feet.

How many square YARDS of carpeting are needed to cover the living room floor?

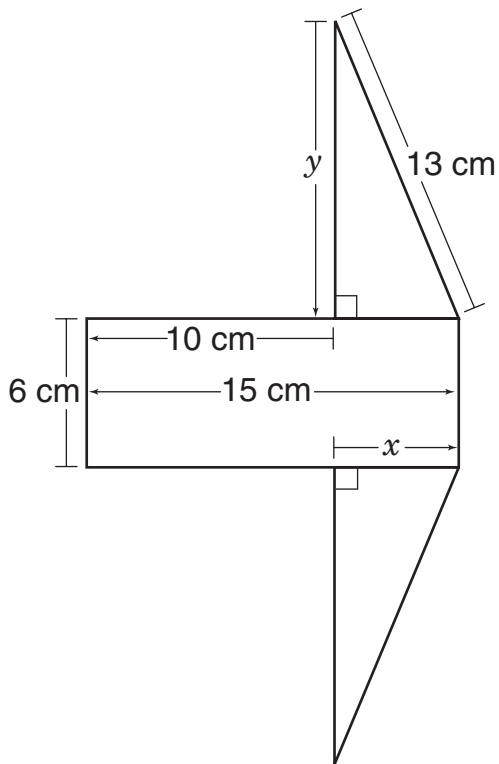
Show All Work

Answer _____ square yards



3

Audrey drew the figure below using two congruent right triangles and a rectangle.



Go On



On the lines below, use words and symbols to explain how to find the missing measurements for x and y on Audrey's figure.

x : _____

y : _____

What is the area, in square centimeters, of Audrey's figure?

Show All Work

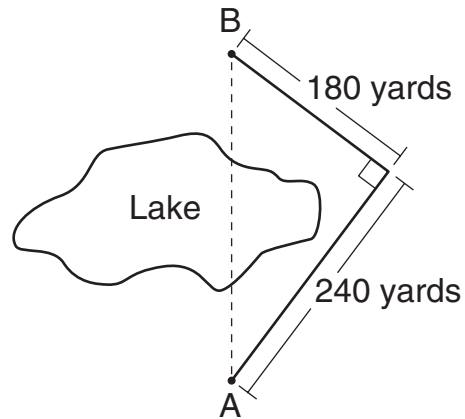
Answer _____ square centimeters



4



Ms. Kelley hit her first golf shot 240 yards. She hit her second shot 180 yards, as shown in the diagram below.



If Ms. Kelley had hit the ball directly over the lake from point A to point B, what would be the distance, in yards, of the shot?

Show All Work

Answer _____ yards

Go On



5



Henry is planning to make spiced apple cider. His recipe calls for 6 cups of apple cider and $2\frac{1}{4}$ cups of pineapple juice. Henry plans to triple the recipe. The grocery store sells apple cider in 64-ounce bottles and pineapple juice in 16-ounce cans. How many bottles of apple cider and cans of pineapple juice does Henry need to buy?

Show All Work

Answer _____ bottles of apple cider

_____ cans of pineapple juice



6



Sara's grandmother has a swimming pool in the shape of a rectangular prism in her back yard. The pool measures 24 feet long, 18.5 feet wide, and 5.5 feet deep across the entire pool.

What is the volume, in cubic feet, of the pool?

Show All Work

Answer _____ cubic feet

Go On



- 7 Chelsea is finding the volume of a cylinder by solving the two equations shown below, where A is the area and V is the volume.

$$A = 3^2 \times 3.14$$
$$V = 16A$$

What is the volume, in cubic units, of the cylinder?

Show All Work

Answer _____ cubic units



8

Darius traveled a distance of 175 miles to visit his nephew.



If he drove continuously at an average rate of 50 miles per hour, how many hours did it take him to reach his destination?

Show All Work

Answer _____ hours



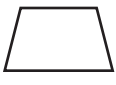


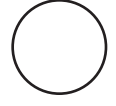
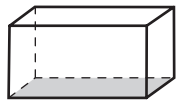
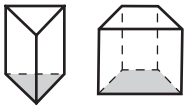

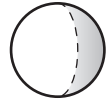




ATTENTION! Please do not leave your punchouts in this book.

STOP! — **STOP!** — **STOP!** — **STOP!** — **STOP!**



ISTEP+ Grade 9 and GQE Mathematics Reference Sheet

Shape		Formulas for Area (A) and Circumference (C)	
Triangle		$A = \frac{1}{2}bh = \frac{1}{2} \times \text{base} \times \text{height}$	
Rectangle		$A = lw = \text{length} \times \text{width}$	
Trapezoid		$A = \frac{1}{2}(b_1 + b_2) \times h = \frac{1}{2} \times \text{sum of bases} \times \text{height}$	
Parallelogram		$A = bh = \text{base} \times \text{height}$	
Square		$A = s^2 = \text{side} \times \text{side}$	
Circle		$A = \pi r^2 = \pi \times \text{square of radius}$ $C = 2\pi r = 2 \times \pi \times \text{radius}$ $\pi \approx 3.14 \text{ or } \frac{22}{7}$	
Figure		Formulas for Volume (V) and Surface Area (SA)	
Rectangular Prism		$V = lwh = \text{length} \times \text{width} \times \text{height}$ $SA = 2lw + 2hw + 2lh$ $= 2(\text{length} \times \text{width}) + 2(\text{height} \times \text{width}) + 2(\text{length} \times \text{height})$	
General Prisms		$V = Bh = \text{area of base} \times \text{height}$ $SA = \text{sum of the areas of the faces}$	
Cylinder		$V = \pi r^2 h = \pi \times \text{square of radius} \times \text{height}$ $SA = 2\pi r^2 + 2\pi rh$ $= 2 \times \pi \times \text{square of radius} +$ $2 \times \pi \times \text{radius} \times \text{height}$	$\pi \approx 3.14$ or $\pi \approx \frac{22}{7}$
Sphere		$V = \frac{4}{3}\pi r^3 = \frac{4}{3} \times \pi \times \text{cube of radius}$ $SA = 4\pi r^2 = 4 \times \pi \times \text{square of radius}$	
Right Circular Cone		$V = \frac{1}{3}\pi r^2 h = \frac{1}{3} \times \pi \times \text{square of radius} \times \text{height}$	
Regular Pyramid		$V = \frac{1}{3}Bh = \frac{1}{3} \times \text{area of base} \times \text{height}$	

Equation of a Line

Slope-Intercept Form:

$$y = mx + b$$

where m = slope and b = y -intercept

Point-Slope Form:

$$y - y_1 = m(x - x_1)$$

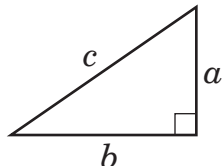
where m = slope and (x_1, y_1) is a point on a line

Slope of a Line

Let (x_1, y_1) and (x_2, y_2) be two points in the plane.

$$\text{slope} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1} \text{ where } x_2 \neq x_1$$

Pythagorean Theorem



$$a^2 + b^2 = c^2$$

Distance Formula

$$d = rt$$

where d = distance, r = rate, and t = time

Temperature Formulas

$$^{\circ}\text{C} = \frac{5}{9}(\text{F} - 32)$$

$$^{\circ}\text{Celsius} = \frac{5}{9} \times (^{\circ}\text{Fahrenheit} - 32)$$

$$^{\circ}\text{F} = \frac{9}{5}\text{C} + 32$$

$$^{\circ}\text{Fahrenheit} = \frac{9}{5} \times ^{\circ}\text{Celsius} + 32$$

Simple Interest Formula

$$i = prt$$

where i = interest, p = principal,

r = rate, and t = time

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

where $ax^2 + bx + c = 0$, $a \neq 0$, and $b^2 - 4ac \geq 0$

Conversions

1 yard = 3 feet = 36 inches

1 mile = 1,760 yards = 5,280 feet

1 acre = 43,560 square feet

1 hour = 60 minutes

1 minute = 60 seconds

1 liter = 1000 milliliters = 1000 cubic centimeters

1 meter = 100 centimeters = 1000 millimeters

1 kilometer = 1000 meters

1 gram = 1000 milligrams

1 kilogram = 1000 grams

1 cup = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

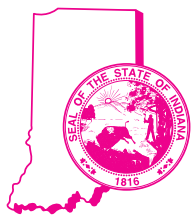
1 gallon = 4 quarts

1 pound = 16 ounces

1 ton = 2,000 pounds

Response Book for Grade 9

English/Language Arts *and* Mathematics



Indiana Department of Education